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FINLAND'S CAPACITY TO PAY THE RUSSIAN REPARATIONS DEMANDS

A study of the various factors determining Finland's capacity to pay the reparation bill included in the rejected Russian armistice terms.

24 June 1944

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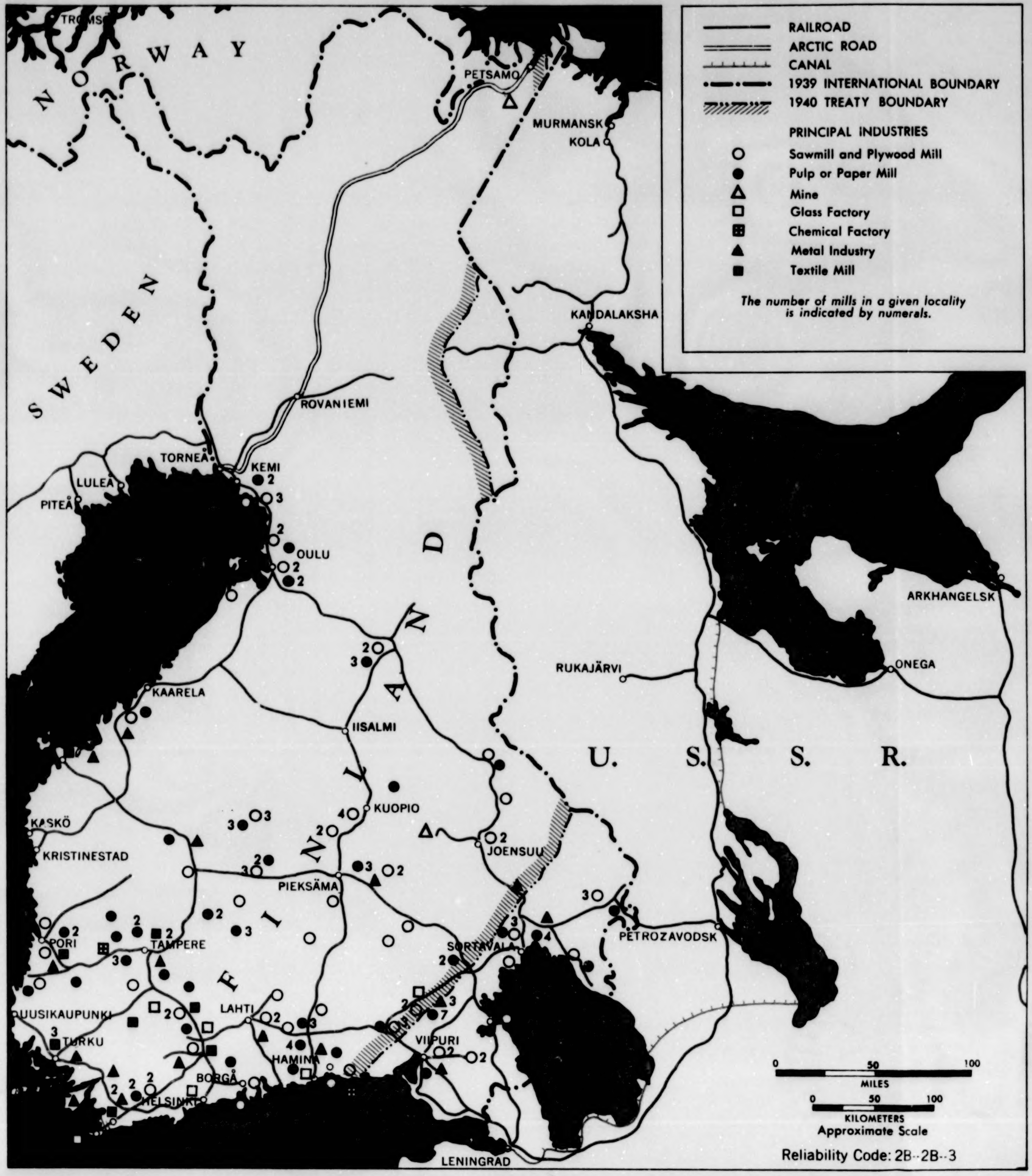
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NOTE

The map referred to on page 11 will be forwarded separately and should be inserted after page 11 in the study.

FINLAND'S CAPACITY TO PAY THE RUSSIAN REPARATIONS DEMANDS

Summary and Conclusions

1. Finland's capacity to pay the Russian reparations demand is examined from the following points of view:

(a) Her total productive capacity;
(b) Her ability to finance the payments;
(c) Her ability to pay the Russians with things they might want.

2. The Russian demand is for 600 million dollars, payable in five years. The main conclusion is that the Finns could meet the Russian bill. Unless foreign loans were forthcoming, Finnish living standards would have to remain at about the low wartime levels; only minimum reconstruction needs could be met.

3. At present dollar prices, the annual reparations payment is equivalent to 100 million 1937 dollars, or 14 percent of Finland's prewar annual income (700 millions in 1937). The payments might be about one-sixth of the reduced income that would be available after the territorial changes imposed by the Russian armistice terms. Finland's annual internally financed defense expenditures are running about 150 million 1937 dollars above those of peacetime.

4. Should the Finns maintain taxes at the wartime level, borrowing could be reduced below the wartime rate, but the payment of reparations would result in an increase in their total public debt from the present level of a half-billion to over 700 millions at the end of the reparations period, or somewhat more than a year's national income. If the wartime rate of borrowing were continued, taxes could be considerably reduced, but the total debt would rise to one billion dollars.

5. Conceivably, the reparations bill might be paid in one or more of three ways:

(a) In labor services;
(b) Directly in kind out of current production or in cash from sales abroad of current production;
(c) In capital goods or cash or other assets out of balances on hand.

The Russians have expressed a willingness to be paid in kind by the Finns: specifically, in paper and cellulose, ships and machinery. Statements of Russian spokesmen on the general subject of reparations suggest that labor services might also be an acceptable means of payment.

6. Payment of the Finnish bill in the latter form would require that the Finns support and put at the disposal of the Russians for five years a labor force of 200,000 men, or 25,000 more than are now in the Finnish armed forces. Payment in this form would be economically but not necessarily politically, feasible for the Finns.

7. At present dollar prices, the Finns probably could pay the Russian bill fully in paper, pulp products, and cash (secured through exports to other countries). Because of the limitations of the productive capacity of Finland's export industries after the territorial transfer, imports would have to be restricted to about half the 1937 amount of $214 millions. Finland's main export industries, paper and wood products, are little dependent on imported raw materials.

8. Only a small part of the reparations bill could be paid in ships and machinery, or in other capital assets. The Finns, who are importers of machinery and only small-scale ship builders, might prefer to pay cash rather than sacrifice from their stocks on hand large amounts of these two categories of goods.

9. The foregoing does not take into account the possibility that the Finns might have to begin payments before hostilities on the continent had ceased. Under these circumstances, Finland's economic position would be extraordinarily hard: labor services, otherwise unemployed, might be the only feasible form of payment.

10. Reportedly, the Russians fixed the reparations bill at one-half the amount of material damages inflicted on them by the Finns. If the same percentage were applied in calculating the German bill, this would total about 10 billion dollars. However, a Russian spokesman has explicitly warned against this sort of mechanical extrapolation. If Germany's reparations bill were the same percentage of their prewar income as is asked of the Finns, the total would be 24 billion dollars, or more than enough to compensate the Russians for all the material damage they have suffered.

11. Since the analysis of the burden of the Russian reparations bill indicates that the Finns have the economic capacity to satisfy the Russian demands, the conclusion must be reached that non-economic considerations constituted the principal reason for the Finnish rejection of the Russian armistice terms.

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I. INTRODUCTION

The imminent possibility that the current Russian drive may soon put Finland out of the war, coupled with the indemnity included in the Russian armistice terms to the Finns, raises for immediate consideration the question of economic factors which must be taken into account in determining the magnitude and method of payment of reparations. The existence of a major recipient, the Russians, apparently willing to receive large quantities of goods as reparations, evidently gives an entirely new character to the current reparations problem as compared with that of the post-World War-I period. The demand on Finland offers an excellent opportunity to examine the implications of this change in a relatively simple case.

Finland's capacity to pay the reparations bill has been widely questioned; in sections of the Finnish press, the negative view is vigorously presented. 1/ Just what weight the indemnity clause had in the Finn's rejection of the Russian terms, however, is uncertain. Their reply, as revealed by Vyshinski, does not distinguish among the

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1/ Cable #347, Helsinki, 24 April 1944 (Restricted); Cable #349, Helsinki, 25 April 1944 (Restricted).

different terms, but the reference in it to "burdens which according to unanimous and comeptent testimony considerably exceed /the Finnish people's/ strength" clearly pertains to the reparations demand, and was so construed by Vyshinski. 1/

The reparations bill is put forth by the Russians to implement their announced policy of holding the aggressors responsible for war damages. While the Finns have rejected the Russian armistice terms, and the reparations bill itself may be altered in any subsequent negotiations, the claim is the most concrete indication of the possible character of Russia's reparation policy yet available.

The Russian bill amounts to 600 million dollars, payable over the course of five years. The Russians have expressed a willingness to be paid, at least in large part, in goods; specific categories of goods requested in the armistice terms were paper, cellulose, sea and river ships, and machinery. 2/

1/ According to Vyshinski, the Finnish emissaries raised no objection to the reparations demand in the course of the armistice discussion in Moscow, the principal question at issue being the Russian demand for the internment or expulsion of German troops in Finland (Cable No. 1413, Moscow, 24 April 1944, Restricted; Soviet Monitor, 23 April 1944). It has been asserted in the Finnish press, however, that the Finnish emissaries were sent to Moscow only to inquire as to the interpretation of the Russian terms, and not to negotiate concerning them. (Cable No. 349, *op. cit.*)

2/ Soviet Monitor, No. 4563, 23 April 1944. See also the dispatch to the New York Times, 24 April 1944, where a demand for ships and machinery is also referred to. The New York Times dispatch of 23 April 1944 refers to provision being made for payment in "cash and goods."

In the following sections Finland's capacity to pay the Russian reparations bill is analyzed from three points of view:

(1) Productive power: The ability of the Finnish economy to provide out of current production a surplus to cover, directly or indirectly, the annual reparations payments; or alternatively the extent to which a net encroachment on previously accumulated wealth would be necessary. This is essentially a question of productive capacity.

(2) Fiscal capacity: The government's ability, through taxation or otherwise, to gain control over the requisite portion of the resources and output of the Finnish economy; that is, the government's fiscal capacity.

(3) Transfer possibilities: The ability of the Finns to pay the Russians with the things the Russians want. This refers to the familiar transfer problem. It should be noted, however, that the sort of capacity referred to in (2) also resolves into a kind of transfer problem, a purely internal one.

All value expressions in the present study are reduced to a single unit of purchasing power, for convenience, the 1937 American dollar. The 1937 price parity between a finnmark and a dollar is estimated at one dollar = 43.08 finnmarks, or one finnmark = 2.321 cents. 1/ The rate of exchange in 1937 averaged about one finnmark to 2.2 cents.

At present dollar prices, the Russian reparation bill of 600 million current dollars would be equivalent to about 500 million 1937 dollars. To the extent that prices fluctuate after the war, the real burden of the reparations payments would be altered correspondingly. Conceivably, however, the Russian terms for payments in kind would not be rigidly tied to market prices; certainly they would not be in the case of payments in labor services.

1/ See Appemdix A.

II. FINLAND'S PRODUCTIVE CAPACITY

A. War Expenditures as an Index of Finland's Capacity to Produce a Reparations Surplus

In Table 1 on the following page are shown the amounts of Finnish defense expenditures in various years, beginning in 1938. In the war years, expenditures have run about 200 million 1937 dollars a year, evidently much in excess of the annual reparations payments that Russia is demanding.

Presumably, some defense establishment would be maintained after hostilities cease. The figure for 1938 defense expenditures already include some extraordinary expenditures for rearmament. Probably a generous estimate of the peacetime requirements is 20 million dollars, which is somewhat above the amount of defense expenditures, 18 millions, included in the "ordinary," as distinct from the "capital," budget in 1938. 1/

Allowing for the peacetime defense requirements, it would appear that the Finns are able to produce a surplus of 180 million dollars a year over and above the amount required for their own support.

1/ Annuaire Statistique de Finlande, 1941, pp. 272-273. See also Bank of Finland, Year Book, 1938, p. 20. Presumably defense expenditures comprised the larger part of an item in the capital budget amounting to 19 million dollars and designated as "expenditures not bringing in any receipts."

Table 1. FINNISH WAR EXPENDITURES[a]

Year	Expenditures, millions of 1937 dollars[b]
1938	30
1940	207
1942	204
1943	190

a/ Sources of figures (in finnmarks):

(i) 1938 and 1942: CID 45536 C. The figure for 1942 is a preliminary estimate.
(ii) 1940: Annuaire Statistique de Finlande, 1941, Helsinki 1942.
(iii) 1943: Airgram, Helsinki, 5 February 1944.

b/ See Appendix A for method of converting finnmark figures into dollars.

B. Foreign Credit as a Source of War Finance

Finland's war expenditures have been partly financed by foreign credits. Thus, the resources devoted to war purposes partly represent a foreign contribution rather than an internally produced surplus.

Towards the end of the third quarter of 1943 the total government foreign debt (consolidated and floating) was 4.0 billion finnmarks, while the net foreign liabilities of the Bank of Finland (mainly on account of clearing indebtedness) amounted to 3.3 billions. 1/ Presumably,

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1/ CID #61177, p. 14.

most of the clearing indebtedness -- which is largely to Germany -- originated after June 1941. The total government foreign debt as of 31 December 1939 was 1.9 billion finnmarks. 1/ Probably the debt had risen by June 1941.

The total war expenditures for the two and a half years following June 1941 may be estimated at 50 billion finnmarks. 2/ Accordingly about ten percent of this amount was financed from foreign credits.

Thus, of the average annual war expenditures of $200 millions, $180 millions may be taken to represent the value produced by the Finns, and $160 millions as the surplus, over and above peacetime defense requirements, that might be available after the war to meet the annual reparations payments if domestic consumption and investment were kept at the present low wartime levels.

C. National Income

While the Finns have been producing in wartime a surplus in excess of the amount required for reparations payments, this does not necessarily imply that they could continue to do so for another five years. For the Finns might be "over their heads," and engaging in an effort which seriously drains their capital resources.

While the burden of the Finnish war effort has been great, there is no evidence in current intelligence reports that the costs have been such as to undermine the productive capacity of the country, and to cause a downward trend in output. On the contrary, recent reports indicate that the trend of output in 1943 was upward, in both agriculture and industry, though a "wear and decline of productive capital" is mentioned. 3/

1/ League of Nations, Statistical Year Book, 1940-1941, p. 243.

2/ See references in Table 1.

3/ See CID #61177; also CID #48073.

A more precise measure of the extent to which the Finnish war effort is within their means is their national income. In Table E on the following page is shown a series of statistics on Finnish national income for the period 1926 through 1938. These figures reveal a steady upward trend temporarily interrupted in the early thirties by the world depression.

Statistics on the wartime changes in national income are not available. But the following reasons make it seem doubtful that the peacetime upward trend could have been maintained:

(1) The volume of foreign trade has been sharply reduced. Imports and exports, which nearly balanced at about $210 million (1937) dollars in 1938, had declined respectively to about $125 millions and $80 millions in 1943. 1/ It is likely that the labor released from export industries is being used very effectively to produce munitions and other goods for domestic use, however.

(2) The territories which were ceded to Russia in 1940 have been only partially reconstructed since the Finns reoccupied them. The original population of these areas, about 450,000 or 12 percent of the entire population of Finland, was evacuated en masse when the territories were first ceded to Russia. It is estimated that some 250,000 have moved back since. The extent of repopulation of the areas retaken from Russia suggests that these areas are now operating at about 50 percent of capacity at the least. It is suggested in Section D below that the normal contribution of these areas to the national product was about 12 percent of the total. Thus about half this amount could be regarded as indicating the percentage decline in total output due to the under-utilization of the areas retaken.

1/ Estimated from figures in League of Nations, Statistical Year Book, 1940-1941, p. 171; and CID #61177 R.

Table 2. NATIONAL INCOME OF FINLAND, 1926-1938

Year	Income, millions of 1937 dollars[a/]
1926	492
1927	548
1928	564
1929	564
1930	569
1931	527
1932	490
1933	522
1934	604
1935	634
1936	682
1937	703
1938	775

a/ Finnmark figures from Mercator, 11 September 1943 (estimates of Professor Valter Lindberg); translation into dollars as described in Appendix A.

(3) The Finns had no large reserves of unemployed labor before the war; 1/ however, a large number of women and children have been drawn into industry and agriculture to replace the mobilized men.

The net effect of these different factors is difficult to appraise. On balance, it seems reasonable to suppose that, under the pressures of war, the national income is not less than 80 percent of prewar, or about $600 millions. It may well be above this amount. Current internally financed war expenditures, thus, should not absorb more than

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30 percent of the national income. The corresponding figure for Germany is about 65 percent. For Russia, which before the war had about the same living standards as Finland, the share of income devoted to war purposes probably is greater than one-half.

In the light of the war efforts of other countries, the conclusion is unavoidable that Finland's present effort is within her long-term capabilities, and that with her present resources she could produce an annual surplus well in excess of the annual reparations requirements.

D. Russia's Territorial Demands and Finland's Productive Capacity

Account must be taken of the fact that, in consequence of the boundary changes imposed by the armistice terms, an appreciable part of Finland's productive resources would be transferred to Russia. The territorial provisions of the armistice terms, as revealed to the public, are not altogether definite. Essentially, the Russians are demanding the restoration of the boundaries fixed by the Treaty of Moscow in 1940. But further cessions in the Petsamo region (not involving the transfer of the Petsamo nickel mines) are required, while at the same time the Russians indicate that their lease to Hango, obtained in 1940, may be foregone. 1/

A map showing the territorial changes imposed by the Treaty of Moscow is presented on the following page. Some notion of the economic loss to the Finns resulting from this transfer may be obtained from the following figures: 2/

(1) About 450,000 people, or 12 percent of the total population of Finland, lived in the ceded areas before the war;

(2) About 10 percent of the total factory labor was employed there;

(3) The ceded areas contained about 8 percent of the total forest reserves.

1/ Soviet Monitor, 23 April 1944.

2/ A summary of Finnish losses in different spheres is contained in the Survey Graphic for April 1941. Additional figures on the losses due to the territorial transfer are inserted in Section IV, below.

The territorial changes would involve, in addition to the transfer of resources, the interruption of important Finnish transport routes. A main railway artery, three important eastern harbors (Viipuri, Koivisto, Uuras), and part of the Saima canal would be transferred to the Russians. These changes presumably would occasion no difficulty so far as the shipment of goods to Russia is concerned.

The net effect of the territorial losses on Finnish productive capacity is difficult to assess quantitatively. It seems reasonable to assume, however, that the over-all reduction in captial and natural resources would not exceed 12 percent, which represents the proportion of the total population living in the ceded areas before the war. This is the largest of the three percentages referred to above.

If the Finns were operating at about their practical capacity in 1938, it might be concluded that the territorial losses would involve a reduction in their potential national income from the prewar level of $775 millions to some $680 millions. The transport difficulties, perhaps, might lead to a somewhat greater reduction than this. But, to be reckoned with also are the two following factors, which act in the opposite direction:

(1) In a number of lines of the important wood and paper-products industry which have been examined (see below) prewar production was well below capacity;

(2) No significant loss in manpower would result from the territorial transfer. Nearly all the inhabitants of the disputed areas were evacuated to Finland when these territories were first transferred to Russia in 1940. Presumably those persons who have returned since the Finns reoccupied the areas will again move back to the territory remaining in Finnish hands.

The territorial losses evidently involve a real loss to Finland's productive capacity, but the effects of this on her national income in the postwar period as compared with that in wartime would be offset in some measure by a postwar revival of foreign trade. 1/

There is no reason to alter the essentials of the conclusion, stated in the previous section, that the Finns are able to produce an annual surplus large enough to meet the annual reparations payments.

1/ The problems that would arise when exports are used to finance reparations are discussed below, but it may be noted here that if exports could be expanded while imports and consumption were maintained at (say) the wartime level, the national income would rise correspondingly.

III. THE FISCAL PROBLEM

A. War Finances

In Table 3 on the following page are shown a simplified version of Finland's budget for 1937 and 1943 and two hypothetical budgets for an average postwar year during the period that reparations would be paid. The figures for 1937 and 1943 represent actual expenditures rather than allocations.

It is evident that the Finns are financing two-thirds of their war time expenditures from taxation and other current income (mainly the receipts on state property, which in 1943 amounted to about 30 million 1937 dollars). Among wartime belligerents, this represents a comparatively high proportion that is currently financed. Because of the fact that the Finnish defense expenditures absorb a relatively moderate part of the national income--certainly not more than a third-- the state's tax and other current receipts do not represent an unusually heavy burden in comparison with that borne by other countries.

The public debt at the end of 1943 amounted to about 475 million 1937 dollars or less than the annual national income of the country.

As to the position of the state's finances at this time, it is worth quoting from a speech by Ryti delivered before the Diet on 29 January 1944: 1/

> "The position of the state economy must be regarded as secure and the budget estimates passed by the Diet for the present year as sound. It is true that taxation has been fairly onerous but everyone is aware of its necessity and, therefore, people have on the whole submitted to it without complaint."

It should be noted in this connection that, though the Finns have financed a large part of their war budget by taxation, rather strong inflationary tendencies have prevailed. 2/ Evidently this reflects a laxity in price

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1/ Airgram, Helsinki, 5 February 1944.

2/ In 1943, wholesale prices were about 250 percent of the 1937 level.

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Table 3. SIMPLIFIED FINNISH BUDGET, 1937, 1943, AND HYPOTHETICAL ANNUAL AVERAGES DURING PERIOD OF REPARATIONS PAYMENTS

(All figures in millions of 1937 dollars)

	1937 a/	1943 b/	Hypothetical annual averages for five postwar years: Budget "A"	Hypothetical annual averages for five postwar years: Budget "B"
A. EXPENDITURES				
1. Defense	20 c/	190	20	20
2. Current expenditures, other than debt charges; capital expenditures, other than for defense and loan redemption	71	80 f/	90	90
3. REPARATIONS	0	0	100	100
4. Interest	3 d/	15	28	23
5. TOTAL EXPENDITURES	94 e/	285 e/	238	233
B. RECEIPTS				
1. Current receipts: taxes, revenue from state property, etc.	100	190	143	190
2. Loans, net of amortization and redemption	- 7	95 f/	95	43
3. TOTAL RECEIPTS	93 e/	285 e/	248	233

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Table 3. (Continued)

a/ Sources of basic data: Bank of Finland, *Yearbook*, 1938, p. 20; *Annuaire Statistique de Finland*, 1941, Helsinki, 1942, pp. 272-273.

b/ Source: Speech of Ryti to Diet, 29 January 1944, Airgram, Helsinki, 5 February 1944.

c/ Defense expenditures, in the amount of 15 million dollars, are listed among the current expenditures in the official budget statistics. However, some defense expenditures undoubtedly were included in the so-called "non-income-producing" category of the capital budget. As a rough estimate, 5 million dollars has been transferred from this category to the category "defense expenditures." The total amount of non-income-creating capital expenditures was 12 million dollars.

d/ According to the official budget statistics, interest and service charges on the public debt amounted to 15 million dollars. At an interest rate of 3.5 percent, which is believed to be about the prevailing rate of interest on the government debt, the interest charges would amount to 3 million dollars. On the assumption that the balance of "interest and service charges" was used to amortize the principal, it has been transferred to account B-2 in the table.

e/ The net excess of expenditures over receipts in 1937 was made up by a net transfer from capital accounts. The budget figures for 1943 are presumably rough rounded sums. In a more accurate statement there probably would be a net transfer from (or to) asset accounts here also.

f/ Category A-2 may include amounts used to amortize debt, in which case these amounts would not be included in Category B-2.

controls, but possibly it might reflect also a heavy reliance on bank credit, as compared with private savings, for war loans.

B. The Finance of Reparations

The two hypothetical postwar budgets in Table 3 incorporate annual reparations payments amounting to 100 million 1937 dollars.

The first budget (A) in Table 3 is drawn up under the hypothesis that the Finns continue to borrow at the wartime levels. The annual borrowing would be 95 million dollars, or 5 millions less than the annual reparations payment. The interest charges in the budget take into account the effect of this borrowing policy on total indebtedness, the amount of interest shown in the budget being, like the other figures, an average for the five reparations paying years.

It is assumed also that the postwar defense expenditures amount to 20 million dollars, the estimated 1937 level.

Evidently, under these assumptions, the Finns could finance the reparations payments and yet reduce the tax load from the wartime level. How much of a reduction could be realized would depend on the amount of ordinary expenditures. In Table 3 it is assumed that these expenditures increase somewhat above the wartime level, to meet reconstruction requirements. In this case, and it might be regarded as extreme, the tax load can be reduced from the wartime 190 to about 150 million dollars a year. This would still be above the 1937 level, however.

The financial arrangements described would leave the Finns with a debt burden of about a billion dollars at the end of the reparations period. This doubling of the size of the national debt would represent a heavy burden for the Finns, but not an unbearable one. The interest charges at the end of the reparations period would be (say) 35 million dollars a year. 1/

1/ The figures on interest charges in the table represent the averages during the reparations period.

Possibly, however, the Finns would prefer to finance a larger part of the reparations payments out of current taxes. The second hypothetical budget (B) in Table 3, is drawn up under the assumption that the wartime tax load is maintained throughout the reparations period. In view of Ryti's statement, on the one hand, and of the difficult wartime economic problems the Finns have faced, on the other, there is every reason to believe that this tax load could be borne in peacetime, though as peacetime budgets go it would be unusually onerous.

In this case, annual borrowing could be cut from the 1943 figure of 95 million dollars to 43 millions. The total debt would rise from the present level of a half billion to over 700 millions at the end of the reparations period. Interest charges would rise to 25 millions a year.

Budget B, as well as Budget A, it should be noted, allows the Finns a margin of 20 million dollars a year, over and above the ordinary expenditures of peacetime, to meet minimum reconstruction needs.

If either of the two hypothetical budgets were adopted, the Finns would have to strengthen their price controls to avoid a continuance of inflation.

IV. THE FORM OF PAYMENT

A. The Transfer Problem

To meet the Russian reparations demands, the Finns must not only produce and finance a surplus but deliver it to the Russians in an acceptable form. Whether this essential last step could be accomplished depends evidently on what specific things the Russians are willing to take and the Finns' ability to supply them directly and indirectly.

Russian spokesmen on reparations have made much of their willingness to take indemnity payments in kind and indicate that they anticipate no transfer problem such as was encountered after the last war to arise after this one, as far as they are concerned.[1]

Evidently this expectation would be entirely warranted only under the following conditions:

1. The Russians are prepared to accept payment in any form whatsoever, without restriction: whether in labor services, in any kind of goods, or in cash or other assets. Furthermore, the form of payment is not limited by political conditions in the payor country. Such factors might well be limitational in the case of (say) labor services, and possibly also in the case of capital goods. To the extent that the form of payment is any way restricted a transfer problem might arise even in payments to the Russians. For in this case surplus values realized by the payor in one form might have to be transformed into another.

2. The valuations placed on the things transferred are reasonable in the light of the production costs of the payor. If the accounting terms followed the course of world prices, the payor might find himself in a position where it was not possible to translate fully a domestic surplus into an exportable surplus of goods and services.

Probably neither of these conditions would be fulfilled in any concrete case. The Russian willingness to take payment in kind might be expected, nevertheless, to facilitate the transfer in important respects. Provided that in fixing the accounting terms some consideration

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1/ See E. S. Varga, O Vozmeshchenii Ushcherba, Prichinennogo Gitlerovskoy Germaniyei Sovetskomu Soyuzu, lecture, delivered 31 August 1943, published as pamphlet, Moscow 1943.

were given to production costs as well as to the course of world prices, the payor might be secured in some measure against unfavorable market fluctuations. Also, if payments were in kind, rather than in cash, the difficulties that might arise from a post-war extension of bilateralism would be largely obviated. Finally, if, as in the case of the Finns, the payor were a large factor in the world market for his exports, this arrangement might assure that the level of world prices was higher than it would be if large amounts of goods were sold for cash.

The Russians have indicated that they are willing to be paid by the Finns in the following specific categories of goods: cellulose, paper, ships, and machinery. Whether the payments would be restricted to these categories of goods is not indicated. But it should be evident that if large amounts of the last two types of goods were stipulated, the Russian willingness to receive goods might have a very dubious value to the Finns. Quite possibly the Finns would prefer to pay cash. With respect to the first two products, furthermore, the value to the Finns of Russia's willingness to take payment in kind is to be judged in the light of the fact that the post-war world market probably will be favorable in any case. In the case of sawn timber, Russia's own exports, a large fraction of the world's supply before the war, will be drastically curtailed, possibly extinguished; at the same time, there will be the large post-war reconstruction demands to meet. Payments in kind, furthermore, might jeopardize Finland's long-run position in world markets.

In the following sections the ability of the Finns to pay the Russians in each of various possible forms will be considered. Aside from the possibility that the Finns might finance reparations by foreign loans, the possibilities would seem to be as follows:

1. Payments in labor services;

2. Payments directly in kind out of current production; payments in cash proceeds from the sale of current output abroad;

3. Payments in capital goods from stocks on hand; payments in cash and other assets from balances on hand.

B. Payments in Labor Services

As far as is known, labor services were not among the means of payment figuring in the Russian negotiations with the Finns. However, a Russian spokesman on reparations has stated that it would be "just and practically expedient" to restore devastated areas with labor from Germany and the satellite countries.[1/]

A transfer of values in this form undoubtedly would be feasible economically, whatever the political difficulties. In view of the problem the Finns might face in finding reemployment for evacuated and demobilized workers and for workers now in munitions plants, the reorganization of the Finnish war economy for the payment of reparations in labor services should not be difficult.

If the productivity of a Finnish worker were about the same as that of the Russian, which is in turn about 40 percent of the American,[2/] the annual value of a Finnish worker's services to the Russians might be put at $500 in 1937 prices. On this basis, the payment of reparations in labor services alone would require the continuous services of about 200,000 men or about 5 percent of the population for five years. In view of the fact that there are presently about 175,000 men in the Finnish armed forces, it seems reasonable to conclude that the Finns could furnish such an amount of manpower.

It should be noted that the armed forces at present are below the average strength since June 1941 -- probably 225,000 men. Finland's policy of reducing the number of men under arms would seem to cast some doubt on her ability to furnish 200,000 men to Russia for five years. However, Finland's policy of partial demobilization only came into effect after the collapse of German offensive warfare on the Eastern Front. The extent of Finland's military effort as an ally of Germany has been directly dependent on the success of German arms, and Finland could wage offensive warfare only as a participant in a Germann offensive.

1/ E. S. Varga, War and the Working Class, No. 10, 15 October 1943.

2/ SSSR i Kapitalisticheskie Strany, Moscow 1939, p. 79.

The supply of such a large number of men to Russia, though, would no doubt mean that Finland's important wood products and paper industries would have to operate well below capacity after the war. In view of their comparative advantage in the production of these goods, the Finns probably would find it more economic to concentrate as far as possible on them, and to pay only a minimum of the reparations directly in labor. The gross value added per worker in Finnish manufacturing industry as a whole amounted to about $1,000 in 1937.

It should follow in these circumstances, however, that if the Finns could pay the reparations in labor, they should be able to pay both in labor and in goods as well. The payment of part of the bill in goods should reduce the total real burden on the Finns, provided the Finns themselves are able to determine the share so paid.

The preceding calculations assume that the Finns continue to support the men placed at the disposal of the Russians. To the extent that this is not the case, of course, the Finns would have to pay for their support indirectly, by shipments of goods or payment of cash to the Russians.

C. Finland's Foreign Trade, 1929-43

Whether the Russians are paid in cash or in goods, it would be necessary for the Finns to adjust their foreign trade to provide a balance of exports over imports adequate to meet the payments. If payments were in cash, the balance would be sold to other countries than Russia and the proceeds applied to the reparations account; if payments were in goods, the balance simply would be delivered directly to Russia in kind.

Some adjustments might also be made, of course, in other than merchandise accounts. But, for the entire period 1923-37, merchandise exports constituted nearly 90 percent of the receipts in Finland's foreign balance of payments, and imports constituted about the same percentage of expenditures, other than on capital accounts. 1/

1/ V. Lindgren, Twenty Years of Economic Reconstruction in Finland, p. 54.

Statistics on the volume of Finnish merchandise imports and exports from 1929 to 1943 are presented in Table 4 on the following page. Evidently in every year prior to 1940 the volume of exports exceeded the amount that would be required for reparations payments. In the early 1930's exports generally also exceeded imports, the total excess in the entire period 1932-36 amounting to about 160 million dollars. The Finns applied the balance on trade account to pay interest on and reduce the principal of their foreign debt. The book value of the foreign public debt was reduced from 2.7 billion finnmarks in 1930 to .9 billion in 1937.[1] Quite possibly there was also a reduction in private indebtedness in the same period.

By 1937 there probably was little if any net outflow of capital. Imports and exports at any rate nearly balanced. Thus, immediately before the war, there was no free balance of exports which might be applied to reparations payments.

During the war years, a trade deficit of some 200 million dollars has been incurred, not including that arising from imports of war materials. A large part of the debt that has been incurred to finance this deficit is to Germany, and presumably need not be considered as a factor that might interfere with Finland's payment of reparations after the war.

D. Postwar Export Possibilities

Any discussion of Finland's exports necessarily centers on her wood and paper products industries. Exports of these products constituted 84 percent of the total Finnish exports in 1937, and amounted to about 180 millions, or considerably more than the annual reparations payments. The main item among the remaining exports was animal foodstuffs which amounted to 14 millions; there was a large miscelleneous category, consisting of metals, textiles, leather, granite, china and rubber goods. (See Table 5 on page 25.)

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[1] V. Lindgren, Twenty Years of Economic Reconstruction in Finland, p. 58. The public debt was booked at the original rates of exchange, prevailing presumably at the time the debt was contracted. If allowance is made for changes in the exchange rates, the 1937 figure should be 1.3 billion finnmarks.

Table 4. FINNISH MERCHANDISE IMPORTS AND EXPORTS 1929-1943 [a]

Year	Imports, millions of 1937 dollars	Exports, millions of 1937 dollars	Balance, excess of exports over imports
1929	183	167	- 16
1932	100	130	+ 30
1933	111	151	+ 40
1934	137	176	+ 39
1935	151	176	+ 25
1936	169	197	+ 28
1937	214	218	+ 4
1938	211	209	- 2
1939	176	181	+ 5
1940	84	46	- 38
1941	133 [b]	57	- 76
1942	126 [b]	64	- 62
1943	122 [b]	83	- 39

a/ Sources of original figures, in finnmarks: League of Nations, Statistical Year Book, 1940-1941, p. 171; League of Nations, Monthly Bulletin of Statistics, March 1944. Finnmark figures converted into dollars as described in Appendix A.

b/ Excluding war materials.

Table 5. FINLAND'S FOREIGN TRADE IN 1937 AND IN A TYPICAL POSTWAR YEAR DURING THE PERIOD OF REPARATIONS PAYMENTS

Category	1937[a/] millions of 1937 dollars	Postwar year, millions of 1937 dollars	Postwar year, millions of Jan. 1944 dollars
1. Exports			
a. Timber and wood products	98	95	141
b. Paper and pulp products	85	80	93
c. Animal foodstuffs; miscellaneous products	35	30	36
d. Total	218	205	270
2. Imports			
a. Consumption goods and raw materials for their production	96	50	71
b. Metals, minerals, machinery and other metal products	89	35	38
c. Miscellaneous raw materials	29	20	25
d. Total	214	105	134
3. Balance: excess of exports over imports	+ 4	+ 100	+ 136

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a/ Basic data from Lindgren, op. cit.

Exports of paper and pulp products, which the Russians have expressed a willingness to take in payment of reparations, had a value of $85 millions in 1937. Settlement of a large part of the reparations account in these goods, thus would assure the Finns a market for a major category of their exports.

In view of the favorable postwar outlook for these and other exports, however, the Finns' own production capacity, rather than market conditions, probably will limit the volume of Finland's postwar exports. From a study of the critical wood and paper-products industries, it appears that so far as production capacity is concerned, the Finns could reattain a level of exports approaching, but not exceeding, the peak prewar levels.

The essential facts on the postwar potentialities of the Finnish wood and paper-products industries can be set forth briefly as follows: 1/

1. The territorial changes imposed by the Russian armistice terms would involve the loss of about 8 percent of Finland's prewar forest reserves. However, the prewar rate of cutting was about 7 percent below the natural growth for all species, and the sharply reduced lumbering activity of the war years has allowed a huge uncut reserve to accumulate. The exploitation of this reserve should yield a postwar timber output at least at the prewar rate, without reducing forest cover below prewar levels. Conservation practices in the domestic use of timber, including some reduction in the large amounts now used as fuel, could make possible a postwar wood-products output considerably in excess of the prewar rate.

2. In the case of fabricating and processing plants, the Finns were generally operating below capacity before the war. However, this excess capacity would be generally wiped out by the cession of territories demanded by Russia. (See Table 6 on the following page.) Very probably plant and equipment have not been maintained in war-time, so that some further reduction in capacity has occurred on this account. War-time operations have been far below capacity, however, and wear-and-tear must have been

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1/ This subject will be dealt with more fully in a supplement to the present report, on Finland's timber economy.

Table 6. FINNISH CAPACITY AND OUTPUT, WOOD AND PAPER PRODUCTS [a]

	Annual Capacity		
	Estimate, 1937	Estimate allowing for territorial losses	Output, 1937
1. Sawmills, thous. standards	1,600	1,350	1,369
2. Plywood, thous. cub. meters	238	190	220
3. Cellulose, thous. metric tons	1,852	1,452	1,474
4. Mechanical pulp, thous. metric tons	820	800	716
5. Newsprint, thous. metric tons	550	525	420
6. Other paper, thous. metric tons	Not Available	37	159

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[a] The sources and bases for these estimates are indicated in a supplement to the present report, now being prepared on the Finnish timber economy.

less than normal. Presumably some replacements of machinery and equipment would have to be made.

3. The total labor force in all Finnish manufacturing in 1937 consisted of but 200,000 workers. Of these 80,000 were engaged in the wood-processing and paper industries. The labor force in forestry is to a large extent recruited seasonally from other occupations. It may be hazarded that, on the average, not more than 150,000 or so were employed in this sector. Since at the present time the timber, wood, and paper-products industry appear to be operating at about 50 percent of prewar, it follows that about 115,000 additional workers would be required to restore these industries to peak operations. Sufficient workers for this purpose would be available after demobilization.

4. The interruption of transportation routes by the prospective frontier change is difficult to assess in terms of wood-products exports. It would be necessary to route timber and products more circuitously from the central and northern regions and to divert exports from the important eastern harbors (Viipuri, Koivisto, Uuras) to others with less adequate dock facilities and inland-waterway connections. The old routes and ports could presumably still be used, however, for all exports to Russia on reparations account, which would somewhat reduce the strain on remaining Finnish shipment facilities.

5. Some appreciable increase in exports might be realized at the expense of domestic consumption. In 1937, domestic consumption of sawn timber amounted to more than a fifth of the total output; and of paper, about one-sixth of the total output. In the case of round timber, very large amounts are now used for fuel.

E. Curtailment of Imports as a Source of Reparations

Aside from the possibility that exports of animal foodstuffs and miscellaneous products could be expanded,[1] it would seem that the Finns would do well after the conclusion of hostilities to realize again their peak pre-war exports of $218 millions. Quite possibly a lower figure is more realistic.

Payment of reparations out of current output, either in goods or in cash, thus would require the curtailment of imports from the 1937 level of $214 millions to a level of around $100 millions. This is the level of imports realized in 1932. At this time exports amounted to $130 millions.

To establish accurately how much the Finns might contract their imports would require a more detailed knowledge of the Finnish economy than is available. But the following facts provide the basis for a rough estimate of the possibilities:

(1) The Finnish lumber and paper industries rely upon foreign raw materials only to a very small extent. According to estimates of 1939, 92 percent of the raw material of the paper and pulp industry and 96 percent of that of the timber industry were of local origin. The substitution of domestic sources of sulphur, chlorine, and resin during the war has reduced this percentage even further.

With respect to equipment, a Finnish source states that "practically every type of machine required by the woodworking industries can be obtained in this country."[2] The two most important producers are located in areas that will remain in the Finns' hands after the war.

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[1] Some contraction probably would be necessary in the case of livestock. However, the Finnish livestock position is not at all comparable to that of the belligerant countries. According to one source, at the present moment (second quarter 1943) "it may be queried whether the total livestock is much smaller than in 1939 -- except in the case of Karelia". (CID 48073)

[2] "Finnish Machinery for the Pulp and Paper Industry," Finnish Trade Review, 1938, No. 2, p. 7 (June).

(2) Of the total imports of $214 millions in 1937, imports of consumption goods and of raw materials to produce consumption goods, excluding animal feed, amounted to about $96 millions. In 1943 it is estimated that these imports had been cut to about $47 millions, or a reduction of $49 millions. This reduction appears to have occurred chiefly in non-food consumption goods. To the extent that the Finns have been depleting their inventories of durable consumers' goods in the last few years, the maintenance of the imports of these goods at war-time levels might involve a further decline in living standards. However, there should be sufficient labor over and above the amount absorbed by the export industries to make possible an expansion of domestic food production above the war time level. Durable consumers' goods imports thus might to some extent be substituted for food.

With respect to foods, war-time production and imports are sufficient to provide an average daily intake of 2,450 calories per capita in 1943-44. There is a considerable variation between the diets of the rural and urban population, however, the former consuming 2,670 calories and the latter 1,960 calories daily.[1] With the end of the war, consumption of Finnish foodstuffs by the German army now in Finland will cease; if distributed to the urban population, this food would provide an additional 256 calories per capita per day. Thus if food imports were continued at the low war-time level and the food formerly consumed by the occupation troops were made available to the urban population, the caloric value of the average urban diet would be raised to 2,213 calories. This would be sufficient to maintain the normal consumers' ration at about 2,000 calories, and to distribute adequate supplementary rations to adolescents, expectant and nursing mothers, and manual workers.

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[1] OSS estimates.

(3) The remaining imports in 1937 (see Table 5) were constituted as follows:

Metal goods, minerals, machinery, equipment, etc.	$89 millions
Miscellaneous raw materials	29 "

In the period 1931-35, the Finnish national income averaged $550 millions, or 80 percent of that of 1937. The average national income in 1931-35 may be compared with that of the post-war period, which is estimated at $680 millions or so. It seems reasonable to assume that on the average during the years 1931-35, the Finns were at least maintaining their total plant and equipment, if not actually engaging in capital formation. Thus, the average 1931-35 imports of metals, machinery, etc., about $35 millions, can be considered as covering maintenance requirements. At the same time imports of miscellaneous raw materials amounted to $19 millions.

To what extent, if post-war machinery imports were at the 1931-35 level, the Finns could rehabilitate their wood and paper-processing industries is uncertain. When it is reckoned that other industries than these constituted about half, in terms of gross value product, of Finnish manufactures in 1937, the curtailment of machinery and metals imports to 50 percent of the 1937 level should leave a sizable volume of imports for the needs of the wood and paper industries and for the plants producing machinery for these industries.

(4) The hypothetical post-war balance of trade in Table 5 is drawn upon the basis of the foregoing considerations. In particular, it is assumed that the Finns could manage to maintain their exports at near the pre-war peak with their

war-time imports of consumption goods, and with the average amount of machinery, metal goods, and miscellaneous raw materials that was imported in the period 1931-35. Under these circumstances total imports would amount to $125 millions (Table 5), and the Finns could meet the annual reparations bill out of a current export surplus.

F. Transfers of Capital Goods and Other Capital Assets

1. Transfers of Capital Goods. With respect to the two categories of capital goods which the Russians have requested from the Finns, machinery and ships, the essential facts as to Finland's reparations potential may be set forth as follows:

(1) Machinery. As should be evident already, Finland has been and is heavily dependent on other countries for machinery, in fact for fabricated metal products of all kinds. The entire output of her engineering and machinery industry amounted to $45 millions in 1937 and slightly more in succeeding years. At the same time imports of machinery and electrical equipment were running at about $23 millions a year, with transportation machinery and fabricated metal products at about the same figure. Exports of these goods have always been insignificant and confined mainly to a few special lines and markets.

In view of what has been said in the preceding sections, it would seem very doubtful that the Finns could spare any large part of their current output of machinery without seriously affecting their capacity to pay in other forms.

The total depreciated value of machinery and equipment on hand in Finland may amount to something in the neighborhood of a hundred million dollars. Possibly significant amounts of machinery now in the consumption-goods industries might be spared without affecting Finland's reparations potential, and could supplement payments from other sources. Obviously Finland could not spare any machinery in the wood and paper processing industries.

(2) Shipping. The Russians have displayed specific interest in both seagoing and river vessels, and the Finnish shipbuilding

industry is presumably well adapted to producing special types suited to northern conditions. So far as payments out of current output are concerned, however, the possibilities are very small--a few million dollars' worth annually--and might be further limited by the necessity of importing much of the steel, propulsion machinery and fittings for the vessels. The total capacity of Finnish yards was estimated at 25,000 GRT in 1941. This capacity has not been fully used in recent years.

Table 7 on the following page indicates the composition of the 1940 Finnish fleet, totalling less than 3/4 million GRT. During the war available tonnage has declined 40 to 50 percent through damage and seizure.[1]

The post-war value of the Finnish merchant marine may be estimated at $65 millions.

Under the circumstances, the possibilities of payment from the stock on hand also would seem to be very limited. Such payments necessarily would have an immediate adverse effect on Finland's balance of payments.

In view of the post-war shipping situation, the Finns might prefer to buy ships abroad rather than to allow their total tonnage to decline further than it has. Certainly such purchases would be more economic than the expansion of Finland's own shipbuilding capacity to meet reparations.

2. Transfers of Other Capital Assets. Finland's position is that of an international debtor with very little gold or other liquid resources. Any significant cash payments to Russia will have to come out of the proceeds of post-war export trade rather than out of present resources.

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[1] OEER, Finland, Part II, 18 February 1943, p. 1. OSS, CID 29011.

Table 7. FINNISH MERCHANT MARINE (Vessels of 19 Net tons and over), 1940[a]

	Number	Gross tonnage (thousands)
Steamships	470	488
Motorships	47	47
Sailing Vessels with auxiliaries	147	15
Other Sailing Vessels	49	29
Barges	1,966	150
ALL TYPES	2,679	729

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a/ Source: *Annuaire Statistique de la Finlande*, 1941, p. 171.

The gold reserves of the Bank of Finland, which in 1939 amounted to about $28 millions, fell by 1941 to the present level of less than $4 millions. The Bank's foreign credit items (mainly foreign currency reserves) declined from $50 million in 1938 to $5 million in October 1943 and on the latter date were overshadowed by foreign debits of $84 millions. The joint-stock banks in 1939-1940 were maintaining foreign credits and debits of $3 million to $10 million, presumably for current operating purposes. No later data are available.

Finland's debtor position is indicated also by interest payments in the international balance of payments. Even before the war (1937-1938) about $4 million was going out annually in interest payments and only one-tenth that amount coming in.

G. Effects of Price Changes

The general level of dollar prices in January 1944 was about 20 percent above the 1937 level. As has been indicated, the total reparations bill in terms of 1937 prices would be $500 millions instead of $600 millions.

However, what counts for the Finns is not how prices in general change, but how the prices of the things they export and import change.

To date, the dollar price changes in the main categories of Finnish export and import goods have been as follows:

	Jan. 1944 as percent of 1937 average
Lumber	148
Paper and pulp	116
Farm products	141
Metals and metal products	108

While the prices of Finnish imports have risen along with the exports, Finland would gain from the increases in the latter slightly more than she would lose from increases in the former. This is shown by the rough calculations in Table 5. There it appears that an export surplus of $100 millions in 1937 prices would amount to $136 millions in January 1944 prices.[1] Thus, at present dollar prices, the kind of trade readjustment that is visualized would leave the Finns some margin over and above the annual reparations payments.

Needless to say, further large price changes are to be anticipated in the post-war period. In view of the reconstruction requirements for one of the main categories of Finnish exports, wood products, a not unfavorable movement in prices would not seem likely.

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[1] In the case of categories 1c and 2c in Table 5, the general price index is used to translate the figures into terms of current dollars.

V. POSSIBLE IMPLICATIONS AS TO RUSSIAN REPARATIONS POLICY

Recent Russian pronouncements on the subject of reparations 1/ would suggest that the following two considerations were among those taken into account by the Russians in fixing the total amount of reparations:

(1) The damage inflicted on them by the Finns; and

(2) Finland's capacity to pay.

Presumably political and military exigencies also played a role, perhaps the most important one.

With respect to the amount of damages the Finns caused, no independent estimate can be advanced. In view of the fact that both Finnish and German troops have been active on the Northern Front, it is difficult to see how any satisfactory estimate of the damage done by Finnish activity alone could be derived.

Interestingly, however, the Russians are reported to have fixed the bill to cover one-half the damage to their property caused by the Finns. 2/ Vyshinski has explicitly warned against any mechanical extrapolation of this relation to other contexts. But it is worth noting that if the Germans were charged reparations at the same rate, the total bill would be about 10 billion 1937 dollars. This calculation is based on an OSS estimate of the total damage that the Russians have suffered as a result of the war. 3/

If Germany's capacity to pay were taxed in the same way as Finland's would be, however, the bill undoubtedly would be much larger. The total reparations bill for Finland amounts to nearly 80 percent of her prewar national income, and a higher percentage of postwar. The same percentage of Germany's (the Old Reich) 1938 income would amount to nearly 25 billion dollars, or enough to compensate Russia for the full amount of the material damage she has suffered.

1/ See Russian War Damages and Possible Reparations Claims, R&A No. 1899, 8 March 1944.

2/ New York Times, 24 April 1944, account of a press conference with Vyshinski, also Cable No. 1537, Moscow, 1 May 1944 (Restricted).

3/ R&A No. 1899, 8 March 1944.

In his statements on reparations, the Russian spokesman, Varga, has emphasized that the bulk of the reparations collected from the aggressor countries must come out of income rather than wealth. In his words, "drawings on the national wealth can.....only cover an insignificant portion of the material damage caused." 1/ In this light, special interest attaches to the Russian request for ships and machinery from the Finns. In view of the Finnish position in respect to both these items, such payments could be a substantial only if they were made out of the accumulated stocks on hand.

1/ Varga, E. S., *War and the Working Class*, No. 10, 15 October 1943.

Appendix A

TRANSLATION OF FINNMARK STATISTICS INTO TERMS OF 1937 DOLLARS

The translation of finnmark figures into terms of 1937 dollars involved two steps:

(a) The translation of current finnmark figures into terms of 1937 finnmarks. This was done by use of the wholesale price index in Table A-1.

(b) The translation of 1937 finnmarks into 1937 dollars. This was done at a price parity rate of 1 mark = 2.321 cents, or 1 dollar = 43.08 marks.

The price parity rate was calculated as follows:

(a) According to Colin Clark, 1/ at the 1929 gold parity of 1 mark = 2.519 cents, the "general price level" in Finland in the period 1925-34 averaged 94 percent of that in the United States in the same period. This means that in the period considered, the price parity was:

$$1 \text{ mark} = (2.519/.94) \text{ cents} = 2.680 \text{ cents.}$$

(b) In 1937 wholesale prices in Finland were 116.4 percent of the 1925-34 average, 2/ while wholesale prices in the United States were 100.8 percent of the 1925-34 average. 3/ Hence the 1937 price parity is taken to be

$$1 \text{ mark} = \frac{100.8}{116.4} \times 2.680 \text{ cents}$$

$$= 2.321 \text{ cents}$$

(c) This price parity may be compared with the mark-dollar rate of exchange, which averaged about 1 mark = 2.2 cents in 1937.

1/ Clark, Colin, Conditions of Economic Progress, London, 1940, Chapter II.

2/ Computed from figures in Table A-1.

3/ Figures from U. S. Bureau of Labor Statistics.

Table A-1. CHANGES IN FINNISH WHOLESALE PRICES, 1925-1943 a/

(1937 = 100 percent)

Year	Index	Year	Index
1925	92.4	1934	81.5
1926	90.6	1935	82.1
1927	90.6	1936	85.0
1928	93.0	1937	100.0
1929	88.8	1938	93.6
1930	81.7	1939	98.1
1931	76.8	1940	143.7
1932	82.1	1941	177.4
1933	81.2	1942	217.1
		1943	244.6 b/

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a/ Sources: League of Nations, Statistical Year Book, 1940-1941, p. 191; League of Nations, Monthly Statistical Bulletin, March 1944; V. Lindgren, Twenty Years of Economic Reconstruction in Finland (Pamphlet), chart, p. 48.

b/ Average for first ten months.